THE GENESEE FARMER.

VOL. VIII. ROCHESTER, N. Y. DECEMBER 8, 1838. NO. 49.

PUBLISHED BY LUTHER TUCKER.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2 50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

☞ THE MONTHLY GENESEE FARMER is made up of selections from this paper, and published on the first of each month, forming, with the Title-page and index, an an-nual volume of 200 pages, at the low price of FIFTY CENTS a year, *payable always in advance.*—Eleven copies for Five Dollars.

THE GENESEE FARMER.

SATURDAY, DECEMBER 8, 1838.

CULTIVATION OF FRUIT.—No. XI.

THE STRAWBERRY.

The number of varieties of this delicious fruit enumerated in catalogues, are very numerous. The late President Knight considered them all as having originated from one species, while others regard them as properly divisible into several species. Passing from the notice of these, it may be useful to cultivators in this country to give brief descriptions of the different classes into which the numerous varieties are divided. Mistakes in names are very frequent, and this may assist in rectifying them.

Class I, includes *scarlet strawberries*, and the general character is thus described by Loudon :—"Leaves nearly smooth, dark green, of thin texture, with sharp pointed serratures; the fruit mostly of small size, and bright color, with the seeds more or less deeply imbedded between ridged intervals; the flavor acid, with slight perfume." Examples, Roseberry, Methven Scarlet or Methven castle, Old Scarlet, &c.

Class II. Black Strawberries. The general character is, "leaves rugose, [or swollen between the veins,] pale green, and small; fruit conical, with a neck; seed slightly imbedded: flavor rich and highly perfumed." Examples, Downton, Pitmaston black, Elton seedling.

Class III. Pine Strawberries. "Leaves almost smooth, dark green, of firm texture, with obtuse serratures; flowers large; fruit large, varying from almost white to purple; seeds prominent on a smooth surface; flavor sweet and often perfumed. Examples, Keen's seedling, Carolina, Mulberry, Southborough seedling.

Class IV. Chile Strawberries. "Leaves very villous, hoary, with small leafets of thick texture, with very obtuse serratures; fruit large; seeds prominent; flesh insipid in the True Chile, and more or less so in the varieties which have originated from it." Example, Wilmot's Superb.

Class V. Hautbois. "Leaves tall, pale green, rugose; scapes tall and strong; fruit middle-sized, pale greenish white, tinged with dull purple; flesh solid and musky."

Class VI. Green Strawberries. Characterised as the *Fragaria collina & F. viridis* of botanists, the varieties of which are little known and not of much value.

Class VII. Alpine or Wood Strawberries. Characterised as *F. semperflorens & F. vesca.* Examples, Red and White Alpine, Red and White Wood.

The following are descriptions of some the best varieties:

Old Scarlet, Early Scarlet, or Early Virginia; fruit middle-sized, globular, of a very light scarlet color, seeds deeply imbedded, flesh pale, and very highly-flavored. Although not a great bearer, yet highly deserving cultivation, as it ripens several days earlier than any other.

Grove End Scarlet, or Atkinson's Scarlet. Fruit large, roundish, somewhat hemispherical, brilliant scarlet, flesh pale, with an agreeable sub-acid flavor. Remarkable for the wide serratures of its leaves. A good bearer and early.

Roseberry. Fruit large, conical, with a very short neck, dark rad; flesh firm, pale scarlet, with a rich flavor. An abundant and long-continuing bearer.

Methven. Fruit very large, round, sometimes coxcomb shaped, bright scarlet; flesh pale and not firm; flavor good, but not so rich as the preceding. Sometimes weighs upwards of half an ounce.

Downton, or Knight's seedling. Fruit large, with a neck, often assuming a coxcomb shape, dark purplish scarlet; flesh scarlet, firm, with a rich, juicy, and high flavor; a good bearer, ripening late. Requires good culture.

Elton seedling. Fruit large, ovate, often compressed or coxcomb shaped, and not filled out at the end of the berry, shining, dark red; flesh fine deep red, firm, juicy, with a sharp rich flavor; fruit on long footstalks, frequently projecting above the foliage; ripens late; must be allo wed to remain on the stem till it becomes very dark colored, to avoid too great acidity.

Keen's seedling. This variety requires protection in the winter by a covering of straw, and is somewhat difficult of cultivation; but when it succeeds well, it is an abundant bearer, and has a very fine appearance. The fruit is very large, ovate, the largest of a coxcomb shape, dark shining red, especially next the sun; flesh scarlet, firm, of a rich and agreeable flavor; ripens rather early in the season. It is considered the best strawberry for forcing.

Wilmot's Superb, is only to be recommended for its great size; the fruit is round or irregularly ovate, sometimes compressed, pale scarlet, shining; seeds projecting; flesh pale red, nearly white, and wooly at the center; flavor moderate.

Prolific or Conical Hautbois, Hudson's Bay, double bearing, Musk, or Spring Grove. Fruit medium size, (large for this class) conical, very dark dull red, inclining to purple on the sunny side; flesh greenish, rather dry, but of a rich and highly perfumed flavor. An abundant bearer. Considered by some as the finest of all strawberries. According to the London Horticultural Society's Catalogue, "of all strawberries, the hautbois are the most variable." They certainly retain a general character, from which they naturally do not depart; but constancy of character in varieties, denominated as distinct, is but little to be depended upon; the fruit will occasionally change from globular to ovate, and the contrary, while fertile plantations will produce runners that may, perhaps, be sterile, and seedlings, many of which will certainly prove so. The latter ought to be carefully looked after and extirpated, which can be only effectually done in plantations newly formed while the plants are single, and at the time they are in blossom. It is also necessary to observe, that in all the sorts of hautbois here enumerated, there exist both the *Prolific*, and also these sterile plants commonly called *Males*, which have *long stamens.* The latter ought, in all cases, to be certainly destroyed." The sterile flowers are distinguished in all the varieties of the hautbois by their long stamens, except in the *Prolific*, which also has long stamens; from *this* they are distinguished by their smaller flowers, and imperfect fructification. Thompson in Loudon's Encyclopedia of gardening, says: "I believe there is no such thing as distinct plants of male and female hautbois. Stamens and pistils are to be found in either a *perfect* or *imperfect* state in every individual flower. Imperfection generally takes place in the pistil, together with the receptacle. To see that these are sound is all that is necessary to be attended to."

Red Alpine. Fruit the largest of this class, conical, red; flesh sweet and high flavored. Bears abundantly in suitable soils and situations, from early in summer till late in autumn. We have seen a dish of them on the table picked the first day of the twelth month (December.) The *white alpine* is similar to the preceding, except the fruit is white instead of red. These two varieties are frequently grown promiscuously together.

The Red Wood and *White Wood* resemble the alpine, but the fruit is smaller and rounder.

The Bush Alpine is distinguished by not spreading by runners. It is not so good a bearer as the red and white running alpine, nor is the fruit quite as good.

The following is nearly the order of succession in which the preceding varieties ripen, except the alpines, which continue in succession.

Old Scarlet,	Prolific Hautbois,
Grove End Scarl	Wilmot's Superb,
Roseberry,	Downton,
Keen's Seedling,	Elton Seedli : ,
Methven,	

Modes of Propagation. Strawberries multiply rapidly during their growth, by runners from the parent plant, which, rooting at every joint, form numerous new plants. To form new plantations, these need only to be removed to the bed where they may flourish. This work may be done any time in autumn, or early in the spring; the latter is best. If done in autumn, care should be taken that the plants are not thrown out by frost, especially onh eavy soils. This may be prevented by treading the soil closely about the roots before the ground becomes frozen. Such beds will bear some fruit the summer following the transplanting, and will furnish an abundant supply the second season. The alpines produce well in one year.

The only exception to this mode of increasing, is the Bush Alpine, which never increase by runners; the only way of propagating this variety is by dividing the root, and transplanting as above described.

Strawberries are only propagated from seed for producing new varieties, except the woods and alpine, which, says Loudon, "come regular from seed, bring a finer fruit than from offsets."

Soil and Situation. The best soil for the strawberry is a deep rich loam, though they will succeed and bear on any soil which is fertile. The situation should be open and well exposed to light and air. They succeed very well when planted in single rows as edgings.—The alpine and wood strawberries may be placed in a more shady situation than the others; it is during hot and dry seasons of the year that they are intended chiefly for bearing. They are consequently well adapted to edgings for shrubbery. When the soil is rich, the advantages of employing strawberries for edging is great, as they succeed in such soils much better when in single rows than when crowded together in a bed.

General Culture. A very general error is to plant too near together, especially if the soil be fertile and well prepared. *Thorough* culture is by far the best, at the same time that it is, ultimately the *cheapest* method. It is true that on common rich garden soils, a bed may be transplanted which will produce fine fruit and good crops with little care after they are once prepared; we have known beds to yield plentifully which were almost untouched for years, not even having been weeded, the thick growth of the strawberry keeping down in a great measure, every thing else. But by the following thorough mode, or one similar, practiced by Keens of Isleworth in England, who first raised the celebrated variety known as Keens' seedling, the greatest amount of fruit may doubtless be obtained for the care and labor expended, while the quality would be greatly superior. The soil for this mode of culture, should be trenched eighteen inches to two feet deep, and mixed with decomposed stable manure; if the subsoil be somewhat sterile, it should not be thrown to the surface. The ground should be prepared at least a month before transplanting. "The best way," says Keens, "to obtain

new plants, is, by planting out runners in a nursery, for the express purpose, in the previous season; for it is a very bad plan to supply new plantations from old plants." The distances of the rows asunder are about two feet, and eighteen inches in the row, for the large varieties, as Methven and Keen's seedling; the smaller varieties may be a little nearer. This distance may seem too great, but it is necessary for sun, air and culture. "These large distances," says Keens, "I find necessary; for the *trusses of fruit in my garden ground are frequently a foot long.*" This fact is a sufficient proof of the excellence of his mode of culture. "After the beds are planted, I always keep them as clear of weeds as possible, and on no account allow any crop to be planted between the rows. Upon the growing of the runners, I have them cut when necessary; this is usually three times in each season. In the autumn I always have the rows dug between; for I find it refreshes the plants materially; and I recommend it to those persons to whom it may be convenient, to scatter in the spring, very lightly, some loose straw or long dung between the rows. It serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon; and thus by a little extra trouble and cost, a more abundant crop may be obtained. A short time before the fruit ripens, I always cut off the runners, to strengthen the root; and after the fruit is gathered, I have what fresh runners have been made, taken off by a reaping hook, together with the outside leaves around the main plant, after which I rake the beds, then hoe them, and rake them again. In the autumn, unless the plants appear very strong, I have some dung dug between the rows, but if they are very luxuriant the dung is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. I have also to remark, that the dung used for manure, should not be too far spent; fresh dung from the stable door is preferable to spit dung, which many persons are so fond of."

In England, where the climate is much more moist and less hot than here, decided advantages are found in watering strawberries during hot weather.

Beds, once prepared, generally continue in a good bearing state from three to five years. J. J. T.

TREATMENT OF THE HORSE.

So far as health is concerned, grass is the best food the horse can receive. When eaten where it grows, the horse is said to be turned out, or to be at grass; when cut and consumed in the stable, the horse is said to be soiled. Pastures differ widely, some containing only one or two plants, others an endless variety; some parts of a field will be highly relished and cropped to the root, while others, luxuriant, healthy, and to the eye attractive, will be touched only from necessity. Whatever may be the nature of the soil or herbage, there should be abundance of grass, a supply of water, shelter from the sun and the storm, and good fences to enforce confinement.

Lameness, when very great, forbids pasturing, no matter where the lameness is seated, even though the herbage be knee high. The pain of standing and moving on two or three legs may be so great, that the horse will be compelled to lie before he has obtained half a meal. In a rich pasture he will lose flesh, and in a poor one he will starve. Horses afflicted with slight lameness only, are benefitted by being turned out; but the pasture should be such as to afford sufficient nutriment, without giving the horse more exercise than is good for the disease.

The position of the head while grazing is unfavorable for a return of blood from the brain; hence a horse subject to the staggers (apoplexy) should not be sent to pasture. Healthy horses are sometimes thus attacked, when first turned out of the stables for the year. Colts that have never had their heads confined in an elevated position either in stable or harness do not suffer in this way.

Colts graze, or feed from a rack with equal facility, but horses that have been more than a year in the stable, and especially those that have been reined up in harness, as some coach horses, often experience great difficulty in grazing. The neck is rigid, and the muscles which support the head are short. It is often several days before the old team horse can graze with ease. Such horses, if they must be turned out, should be watched for a few days, lest they die of want. Their proper place, however, is the stable.

If a horse is turned from the stable without preparation, he is apt to have an attack of inflamed lungs, a sore throat, with discharge from the nose. Wet cold weather always produces emaciation, and long hair. Many horses thus injudiciously exposed, sicken and die. A fool will often sacrifice his interest to a certain extent, rather than be guilty of kindness to his horse, or give himself any trouble to preserve him from injury. In time a horse will become accustomed to the weather, if he does not sink under it; but often he contracts a cough which never leaves him, ending with the heaves or broken wind.

Shelter is indispens
and winter. A mere h
and plenty of litter,
blast, and keep off the
weather is not so perni
during the extreme hea
seeks a shelter, proves
Heat and the fly togeth
ously; the eye and the
tion and the fever. Th
against his insect torme
deposits its nits on his l
by the tongue to the s
which stings him severe
midge or gnat which bi
his eyes,) is his tail; bu
fashion, he is most usu
with them as best he
or are subject to gourd
they become smooth a
moist, inflammation wil

At pasture a horse m
not get enough; in a ri
iently fat; in a poor o
placed in a poor pastu
lowance of oats, to ke
health and flesh. If
better be too lean than
dition however will tel
the horse will always pa

Horses are frequentl
spring, a bad policy wh
as there is grass enough
it is then young, tender,
better than at any other
winter, may be turned
Winter grazing is pract
for the legs than spring
mon to give a horse a dose or two of physic at the time of sending him to grass In some cases it may do good, but so far as the mere change of diet and lodging is concerned, it is quite unnecessary.

If a horse has been clothed in the stable, it should be first lightened, and then taken off a week or two before turning out. The temperature of the stable is then gradually reduced till it becomes the same as that of the external air. If the horse goes out at the end of summer or autumn, he should go before his winter coat comes on, since if its growth is completed in the stable, it may not be sufficient to keep him warm when exposed to the air. If turned into rich feed, he should receive his usual food before going out; this will prevent greediness, and consequent indigestion, which destroys many horses. Weather permitting, night is the best time for turning out, as the horse will at first eat less, and is not so apt to gallop about.

When taken from grass to warm stables, horses frequently become diseased. Some catch cold, some suffer inflammation in the eyes, some take swelled legs, cracked heels, grease, founder surfeit, or a kind of mange; and physic is often, indeed generally, given to prevent them. During the first week of stabling, the temperature should be little above that of the external air; afterwards it may be gradually raised by slow degrees till it is as warm as circumstances or the work demand. The propriety of giving physic after grazing has been much questioned. In books it is sometimes condemned as pernicious, sometimes as useless; but in the stable it is generally approved. The grooms say that physic prevents swelled legs, bad eyes, &c. We think physic in this case is beneficial, but if the horse is lean, he should stand several days before the physic is given after being put in the stable. When a horse does not feed well, it is probable the digestive organs are weakened, and in such cases a tonic ball, between doses of mild physic, are very useful. Four drachms of gentian, two of ginger, and one of tartar emetic, made into a ball with honey, form a very useful tonic. One of these may be given every day, or every second day for a fortnight. If not improved by these, a veterinary sur

BOU
OUT
ORD

more work than can be done in season; or that he acts reasonably, who requires six weeks of Indian summer in November to complete his autumn work.

That it is a saving to use tools half made and of inferior kinds, because they are called cheap. Such implements are not unusually much the dearest in the end.

That cheap laborers, on the farm, or cheap teachers in the school; or cheap professional men, are always the best. A good thing of any kind should always command good prices; and the sixpence saved here, is frequently a dear one to the person saving it.

That it is better to borrow tools required by the farmer, than to own them. It cannot be expected that the farmer should possess all the tools required by mechanics; but he should own all the implements necessary to *his* business of cultivating the earth.

That it is better to beg, or steal, fruit from neighboring farmers, than to be at the trouble or expense of procuring from the nursery new trees, or grafts, of the kinds of fruit desired to furnish the requisite supply at all seasons.

That a good education is not necessary for a farmer. To simply read and write is well; but it is not enough. A knowledge of men and things is necessary to a good

fect of the sun upon unripened wood? The disease has been known in this section of country about six years; it commenced on my trees this season about the 20th of May, when the trees were in full blossom and continued till the first of September. The months of April and May were remarkably cold and wet, the summor hot and dry. The apple trees and the quince are affected by the disease, but not to the extent of the pear.

As to some experiments that I made on plums (see New England Farmer, vol. 15, No. 31,) not one of them answered any good purpose.

Doct. J. P. Kirtland, a gentleman who has had probably more experience than any other man west of the Alleghany mountains, says, (in a report to the legislature of Ohio) he knows from experience that hogs, whenever they can have ready access to the tree to eat the premature falling fruit, and root and rub around the tree, is an effectually remedy. A gentleman at my house a few months since, says that he has a plum orchard, which for a number of years used to be loaded

massacre arrived. I had five full observing glass hives at the same time in operation, varying in hiving swarms in them two or three days. One hived July 2d, had eggs laid the first night; eggs were seen in some of the cells before they were to exceed the eighth of an inch in depth, and chrysalises were forming on the tenth day after hiving. In other hives chrysalises were not discovered until the thirteenth day.

That no brood comb will ever be made in a hive of bees, unless eggs are laid in the cells, is another fact which is corroborated with other experiments in this case. Bees usually make combs containing coarse cells in some sheets and fine ones in others, either of which are proper receptacles for storing honey, or bread, but they never make either exclusively for raising young bees, unless they discover eggs in the cells. Then, if the cells are too deep, the bees cut them down to three-fourths of an inch in depth for workers; if too shallow they build on and extend them to the same depth in new combs, and never alter them afterwards unless they are broken by accident or otherwise injured. So with the proper for raising drones, when are laid in them, they are altered these cells are more liable to be ently so altered as to suit the es for storing honey, after the de their escape.

ver made except when a young hough in frequent ins'ances there de in a season in a hive of bees, ver raised in a cell. They are side of the combs near the wor- fourth of an inch deep, perfect- wards, and are always destroy- own to a mere nub, with a hole men pea, very soon after the es- n from the cell. But this ex- n the development of one other be mentioned. In order to ex- great particularity, I devised r in the hive of a portion of its e bees to descend upon the bot- few among the combs, which ute inspection of the whole in- upon it was discovered that the loaded with the pollen of flow- nstrates, that it agrees with re- nts directed to the same point , or bee bread, is designated for t perfect bees do not eat it; y an old hive of bees becomes t article of food, a superabun- than useless to them, and for scovered a remedy, but cannot

tirely useless to the apiarian, roborated by other testimony, anding the queen leads out the , yet the bees usually lead the . True, indeed, the bees will in a few minutes, unless their e air. I have known many in a body and remain several when I stood very near them; as inclined to conceal herself extremely timid, and a little It is believed that her timidity sition to sting when caught. I never could discover in her the least hostile feeling except when conflicting with one of her own species. I have been unable hitherto, in any trial, to excite her anger; her whole object seems to be to make her escape.

In this experiment, the queen was suspended on one side of the hive against the glass, the bees clustered in a body on the opposite side of the hive; some twenty or thirty minutes after the bees were hived, I found many of them clustered and clustering about the entrance of the hive, on its outside. On opening the door, I found but two bees with their sovereign; I immediately brushed all the bees into the hive, and confined them therein, with the expectation that when the bees found their queen was not with them, nor any probability of her coming, they would grow restless, and run around the hive to find their way out, and would thus come across their sovereign; they did so, and in the course of an hour I found her whole colony clustered around her.

Now as I had observed all the material facts in the case, for twenty days, and observing also their perfect negligence and inactivity ten days after the bees had cleared the hive of their lifeless queen, I determined to let the swarm perish in their own way. But as I was looking into the hive, I discovered through the glass a moth miller attempting to lay her eggs in the combs without the least resistance on the part of the bees.—This discovery inspired my mind with new resolutions. That the bees must inevitably perish by the moths—the besom of destruction—was so repugnant to my feelings, that I determined to advise with that worthy gentleman, Rev. W. C. Fowler, Professor of Natural History, in Middlebury College, now Professor in Amherst College, Massachusetts, who suggested the propriety of supplying them with a queen. But the season had already advanced to August 5th, full two weeks after the close of the swarming season, so that no young queens could be caught, and I had not taken the precaution to preserve any exta queens this season—hence a good old hive of bees must be sacrinced in order to preserve the one I had been experimenting with. But go they must, for I never hesitate or refuse to sacrifice a good swarm of bees, if one fact, ever so minute, can be discovered by suffering such a temporary loss. The hive selected, was taken from the stand at noon-day; I inverted it and took out all the comb, honey and bees, (the bees went into the adjoining hives) this done, I selected brood comb of workers only, containing eggs, larvæ, and chrysalises, in all their stages, placed the comb carefully in a drawer, in its natural position, and inserted the same into the chamber of the hive, so that the bees could repair their loss by making a queen in their own way.—They did so, and on the eighth day they had a queen; and here I ought to mention the fact that the bees, on the third day after they were supplied with brood, resumed all their natural habits, labored with seeming redoubled vigilance, obtained a complete victory of the moths, expelled every one of them from their tenements and protected their hive as usual.

In this experiment, I was a little disappointed in one respect only. I supposed the bees would enter the drawer, erect a cell, and raise their sovereign in the chamber; but instead of doing this, they made their arrangemen's below, where the main colony were located, carried down the larva, where it was more convenient for them to exercise their peculiar instinctive wisdom among new combs of their own manufacture.

On expelling the bees from the combs on the 21st day of August, (queen eight days old) I found eggs in some of the cells, and the bees changing them into brood comb as fast as possible. Notwithstanding their entire overthrow was for awhile predicted, yet by giving them grubs of workers, they have supplied themselves with a queen, which has inspired them with new ambition, and I have the satisfaction of seeing them replenish their stock with young bees, which was already somewhat reduced by the loss of many of their companions being caught by the birds and lost by other casualities, and the bees in as good condition for wintering as any of my hives. Respectfully yours,

Middlebury, Vt. JOHN M WEEKS.

Watering Places.

Every farmer should endeavor to have a good watering place for his stock. Some indeed have great inconveniences to contend with in this respect; but in most cases where the watering place is bad, it is owing to sheer negligence. Stock of every kind need a good supply of pure water, and if they do not have it they cannot thrive, nor be kept in good condition. In order for creatures to drink conveniently, the water should be in a trough elevated a little from the surface of the ground. When the water is in a brook, pond or spring, the ice and snow generally accumulates around it to a great depth, and if it is shovelled out, it is liable to be blown in again in a short time. When animals have to stoop down and then with difficulty reach the water, they frequently get much less than they want, as it is attended with great exertion. Some young or weak ones are often driven away by the stronger, so that sometimes they do not get any water.

In most all cases the watering place, even when it is a poor one, is where the water descends, and by carrying it in a spout a short distance, it will attain a sufficient elevation, and may then be discharged into a trough; that will be a convenient place to accommodate the poor thirsty beasts, who will amply reward their owners for the trifling expense. In many cases water can be conducted in a spout from a spring or brook in the side of the bank, so as to prevent its freezing in the winter, until it is high enough to go into a trough. Now is the time for farmers to attend to this business who have not already done it.—*Yankee Farmer.*

The Bush Cow.

A remarkably curious animal has just arrived in this country from Sierra Leone, which is attracting a good deal of attention among naturalists. It resembles in form a common cow, but is thinly covered with coarse hair of a dirty yellow color with tufts of the same hanging down at equal distances over her broad pendulous ears, and has altogether a most singular appearanne.—It comes from the interior of Western Africa, and is but little known even to the natives, who call it the Bush Cow. No other specimen has ever been brought to Europe, nor are the colonists of Sierra Leone at all acquainted with it, and it is believed to be quite undescribed. It has been deposited for the present at the Surrey Zoological Gardens.—*London Farmers' Magazine.*

new plants, is, by planting out runners in a nursery, for the express purpose, in the previous season; for it is a very bad plan to supply new plantations from old plants." The distances of the rows asunder are about two feet, and eighteen inches in the row, for the large varieties, as Methven and Keen's seedling; the smaller varieties may be a little nearer. This distance may seem too great, but it is necessary for sun, air and culture. "These large distances," says Keens, "I find necessary; for the *trusses of fruit in my garden ground are frequently a foot long.*" This fact is a sufficient proof of the excellence of his mode of culture. "After the beds are planted, I always keep them as clear of weeds as possible, and on no account allow any crop to be planted between the rows. Upon the growing of the runners, I have them cut when necessary; this is usually three times in each season. In the autumn I always have the rows dug between; for I find it refreshes the plants materially; and I recommend it to those persons to whom it may be convenient, to scatter in the spring, very lightly, some loose straw or long dung between the rows. It serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon; and thus by a little extra trouble and cost, a more abundant crop may be obtained. A short time before the fruit ripens, I always cut off the runners, to strengthen the root; and after the fruit is gathered, I have what fresh runners have been made, taken off by a reaping hook, together with the outside leaves around the main plant, after which I rake the beds, then hoe them, and rake them again. In the autumn, unless the plants appear very strong, I have some dung dug between the rows, but if they are very luxuriant the dung is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. I have also to remark, that the dung used for manure, should not be too far spent; fresh dung from the stable door is preferable to spit dung, which many persons are so fond of."

In England, where the climate is much more moist and less hot than here, decided advantages are found in watering strawberries during hot weather.

Beds, once prepared, generally continue in a good bearing state from three to five years. J. J. T.

TREATMENT OF THE HORSE.

So far as health is concerned, grass is the best food the horse can receive. When eaten where it grows, the horse is said to be turned out, or to be at grass; when cut and consumed in the stable, the horse is said to be soiled. Pastures differ widely, some containing only one or two plants, others an endless variety; some parts of a field will be highly relished and cropped to the root, while others, luxuriant, healthy, and to the eye attractive, will be touched only from necessity. Whatever may be the nature of the soil or herbage, there should be abundance of grass, a supply of water, shelter from the sun and the storm, and good fences to enforce confinement.

Lameness, when very great, forbids pasturing, no matter where the lameness is seated, even though the herbage be knee high. The pain of standing and moving on two or three legs may be so great, that the horse will be compelled to lie before he has obtained half a meal. In a rich pasture he will lose flesh, and in a poor one he will starve. Horses afflicted with slight lameness only, are benefitted by being turned out; but the pasture should be such as to afford sufficient nutriment, without giving the horse more exercise than is good for the disease.

The position of the head while grazing is unfavorable for a return of blood from the brain; hence a horse subject to the staggers (apoplexy) should not be sent to pasture. Healthy horses are sometimes thus attacked, when first turned out of the stables for the year. Colts that have never had their heads confined in an elevated position either in stable or harness do not suffer in this way.

Colts graze, or feed from a rack with equal facility, but horses that have been more than a year in the stable, and especially those that have been reined up in harness, as some coach horses, often experience great difficulty in grazing. The neck is rigid, and the muscles which support the head are short. It is often several days before the old team horse can graze with ease. Such horses, if they must be turned out, should be watched for a few days, lest they die of want. Their proper place, however, is the stable.

If a horse is turned from the stable without preparation, he is apt to have an attack of inflamed lungs, a sore throat, with discharge from the nose. Wet cold weather always produces emaciation, and long hair. Many horses thus injudiciously exposed, sicken and die. A fool will often sacrifice his interest to a certain extent, rather than be guilty of kindness to his horse, or give himself any trouble to preserve him from injury. In time a horse will become accustomed to the weather, if he does not sink under it; but often he contracts a cough which never leaves him, ending with the heaves or broken wind.

Shelter is indispensable for the horse, both summer and winter. A mere hovel or shed with a dry bottom and plenty of litter, will tempt the horse from the blast, and keep off the rain or snow. Exposure to hot weather is not so pernicious as cold, but the fact that during the extreme heat of the day the horse always seeks a shelter, proves that it is essential to his comfort. Heat and the fly together sometimes injure a horse seriously; the eye and the brains suffering from the irritation and the fever. The principal defence of the horse against his insect tormentors, (such as the bot fly, which deposits its nits on his legs, whence they are transferred by the tongue to the stomach; the common horse fly which stings him severely and sucks his blood, and the midge or gnat which bites through his skin or gets into his eyes,) is his tail; but of this, such is the absurdity of fashion, he is most usually deprived, and left to battle with them as best he may. Horses whose legs swell, or are subject to gourdiness are improved by pasture; they become smooth and finer; and if the pasture is moist, inflammation will sometimes be benefitted.

At pasture a horse may get too much food, or he may not get enough; in a rich pasture he may get inconveniently fat; in a poor one he may be half starved. If placed in a poor pasture he should receive a daily allowance of oats, to keep him at the proper degree of health and flesh. If a horse is to work fast, he had better be too lean than too fat at commencing; his condition however will tell what is wanted; and at work the horse will always pay for his feed.

Horses are frequently turned out too early in the spring, a bad policy where it can be avoided. As soon as there is grass enough to fill himself, is the best time; it is then young, tender, juicy, and agrees with his health better than at any other time. Those that are to be out all winter, may be turned off at any time in September. Winter grazing as practiced in England, is found better for the legs than spring or summer grazing. It is common to give a horse a dose or two of physic at the time of sending him to grass In some cases it may do good, but so far as the mere change of diet and lodging is concerned, it is quite unnecessary.

If a horse has been clothed in the stable, it should be first lightened, and then taken off a week or two before turning out. The temperature of the stable is then gradually reduced till it becomes the same as that of the external air. If the horse goes out at the end of summer or autumn, he should go before his winter coat comes on, since if its growth is completed in the stable, it may not be sufficient to keep him warm when exposed to the air. If turned into rich feed, he should receive his usual food before going out; this will prevent greediness, and consequent indigestion, which destroys many horses. Weather permitting, night is the best time for turning out, as the horse will at first eat less, and is not so apt to gallop about.

When taken from grass to warm stables, horses frequently become diseased. Some catch cold, some suffer inflammation in the eyes, some take swelled legs, cracked heels, grease, founder surfeit, or a kind of mange; and physic is often, indeed generally, given to prevent them. During the first week of stabling, the temperature should be little above that of the external air; afterwards it may be gradually raised by slow degrees till it is as warm as circumstances or the work demand. The propriety of giving physic after grazing has been much questioned. In books it is sometimes condemned as pernicious, sometimes as useless; but in the stable it is generally approved. The grooms say that physic prevents swelled legs, bad eyes, &c. We think physic in this case is beneficial, but if the horse is lean, he should stand several days before the physic is given after being put in the stable. When a horse does not feed well, it is probable the digestive organs are weakened, and in such cases a tonic ball, between doses of mild physic, are very useful. Four drachms of gentian, two of ginger, and one of tartar emetic, made into a ball with honey, form a very useful tonic. One of these may be given every day, or every second day for a fortnight. If not improved by these, a veterinary surgeon is required. Bleeding we cannot think very necessary to any horse, and to a lean one it may be pernicious. If required at all, it is probably after the horse is stabled and acquiring flesh too rapidly. In most cases physic is altogether preferable to bleeding.

POPULAR ERRORS.

That it is good policy to burn green wood in winter; or that farmers do not find ample remuneration in providing wood-houses, and securing wood from the weather.

That there is no danger in sowing chess with wheat, as chess does not grow. The truth is, chess will, and does grow, and is a hardier plant than wheat, which accounts in fact for its occupying the ground so extensively where the wheat has been winter killed.

That if a farmer is obliged to keep his cattle on a 'limited allowance,' or on inferior food, it is better to stint them the early part of the season, or give them the poor food first. The converse of both these propositions is the truth.

That farmers in putting their crops into the earth should pay attention to the phases of the moon. On land well manured, well tilled, and the seed put in in good season, the moon never does any injury.

That Canada thistle seed does not vegetate, and hence is not injurious in grass or other seeds. Canada thistle seed *will* vegetate, and he who knowingly sells this seed with other seeds, is as richly deserving a place in the penitentiary as the man who fires his neighbor's barns or stacks.

That it is better to hold on to things a farmer may have for sale, after a fair remunerating price is offered, in the hope of obtaining extravagant rates. The chances are ten to one in such cases that a loss is sustained. If you wish to sell, sell; if not, never put an article into the market.

That it is a good plan to undertake a great deal more work than can be done in season; or that he acts reasonably, who requires six weeks of Indian summer in November to complete his autumn work.

That it is a saving to use tools half made and of inferior kinds, because they are called cheap. Such implements are not unusually much the dearest in the end.

That cheap laborers, on the farm, or cheap teachers in the school; or cheap professional men, are always the best. A good thing of any kind should always command good prices; and the sixpence saved here, is frequently a dear one to the person saving it.

That it is better to borrow tools required by the farmer, than to own them. It cannot be expected that the farmer should possess all the tools required by mechanics; but he should own all the implements necessary to *his* business of cultivating the earth.

That it is better to beg, or steal, fruit from neighboring farmers, than to be at the trouble or expense of procuring from the nursery new trees, or grafts, of the kinds of fruit desired to furnish the requisite supply at all seasons.

That a good education is not necessary for a farmer. To simply read and write is well; but it is not enough. A knowledge of men and things is necessary to a good

fect of the sun upon unripened wood? The disease has been known in this section of country about six years; it commenced on my trees this season about the 20th of May, when the trees were in full blossom and continued till the first of September. The months of April and May were remarkably cold and wet, the summor hot and dry. The apple trees and the quince are affected by the disease, but not to the extent of the pear.

As to some experiments that I made on plums (see New England Farmer, vol. 15, No. 31,) not one of them answered any good purpose.

Doct. J. P. Kirtland, a gentleman who has had probably more experience than any other man west of the Alleghany mountains, says, (in a report to the legislature of Ohio) he knows from experience that hogs, whenever they can have ready access to the tree to eat the premature falling fruit, and root and rub around the tree, is an effectually remedy. A gentleman at my house a few months since, says that he has a plum orchard, which for a number of years used to be loaded with fruit; the plums commenced falling soon after they were formed and continued to fall during the whole season, so that scarce any ever ripened. Ten years ago he converted it into a hog pen, and since has never failed to have plums in abundance.

If any gentleman will call at my house in Euclid and examine my pear trees, and is not fully convinced that the disease is an epidemic, I will give him a plain farmer's dinner. Respectfully yours, &c.

Euclid, Nov. 4, 1838. M. L.

From the Yankee Farmer.

BEES.

Mr. Bosson—Sir, I recollect saying to you, last spring, that if anything new or interesting should result from any experiments I might make this season, on the management of bees, I would send you a communication for insertion in your valuable paper. Among the experiments I have tried, no new result, unknown to me before, has developed itself. Yet to many of your readers, both interest and information may be derived from these experiments.

On the 6th day of July last, I experimented as follows: I took the queen from a first swarm of bees out of the same hive this season; inserted a common pin through her chest (which killed her immediate.) I then confined the queen with the pin in the centre of a fine but very strong string, about eighteen inches in length, the ends of which I fastened at the two opposite corners of the hive, near the top, by means of little weights, in such a manner that her lifeless majesty was suspended on one side of the hive against the glass. I then let in the swarm, and confined the bees therein, until they found their sovereign, and clustered about her; this done, I withdrew the gate from the entrance of the hive, and gave the bees liberty to work.

The foregoing experiment demonstrates several important facts. First, that there is no monarchical government in a hive of bees; nor domineering power in the queon. Notwithstanding their sovereign was dead, yet the bees commenced making comb immediately, and continued their labors with perfect regularity as long as the queen remained in the hive; the queen being attached to the string being confined to the top of the hive a dozen inches apart, two legs of a perfect right angle was formed, with her highness at the junction of its two legs; at the same time, the common working bees were constantly climbing the string which kept the lifeless carcass of their venerated sovereign in constant motion. During the whole time of the process in this part of the experiment, both day and night, there were about a dozen working bees, which stood around her majesty, with their heads directly towards her, seemingly in amazement, or holding a solemn council; at the same time there were other bees which seemed to be infatigable in exercising all their biting powers to cut off the string and liberate their mistress from her unnatural confinement. Now whether it was the intention of the bees to cut off the string to liberate their soverign and see whether she was living or not, or to remove the string as a nuisance to them, or drag their dead queen out of the hive, is more than I can determine; but one thing is certain, by the unremitted perseverance of the bees, on the 25th day of July, twenty days from hiving them, they succeeded in loosening the string, and the whole, string, pin, and lifeless carcass of their dried up and emaciated sovereign was found dragged out, altogether, at the mouth of the hive, and the bees stopped work.

This experiment has demonstrated other facts which I think to be of prime importance to every person engaged in the cultivation of bees. One is this. No young bees can be raised without a living and fruitful queen. In this instance, there were no eggs laid, no young bees raised, and yet there were drones seen in the hive, during the whole twenty days, and also during their recess of labor, and until the season for their general massacre arrived. I had five full observing glass hives at the same time in operation, varying in hiving swarms in them two or three days. One hived July 2d, had eggs laid the first night; eggs were seen in some of the cells before they were to exceed the eighth of an inch in depth, and chrysalises were forming on the tenth day after hiving. In other hives chrysalises were not discovered until the thirteenth day.

That no brood comb will ever be made in a hive of bees, unless eggs are laid in the cells, is another fact which is corroborated with other experiments in this case. Bees usually make combs containing coarse cells in some sheets and fine ones in others, either of which are proper receptacles for storing honey, or bread, but they never make either exclusively for raising young bees, unless they discover eggs in the cells. Then, if the cells are too deep, the bees cut them down to three-fourths of an inch in depth for workers; if too shallow they build on and extend them to the same depth in new combs, and never alter them afterwards unless they are broken by accident or otherwise injured. So with the coarse cells, which are proper for raising drones, when empty of honey, eggs are laid in them, they are altered to an inch in depth; these cells are more liable to be changed, and are frequently so altered as to suit the convenience of the bees for storing honey, after the young drones have made their escape.

The queen's cell is never made except when a young queen is wanted. Although in frequent instances there are several of them made in a season in a hive of bees, yet, but one queen is ever raised in a cell. They are usually attached to the side of the combs near the worker's cells, one and one-fourth of an inch deep, perfectly round-pointing downwards, and are always destroyed, by being worked down to a mere nub, with a hole about the size of a common pea, very soon after the escape of the young queen from the cell. But this experiment goes further in the development of one other fact which ought here to be mentioned. In order to examine the comb with great particularity, I devised means to exhaust the air in the hive of a portion of its vitality, which caused the bees to descend upon the bottom board, leaving but few among the combs, which greatly facilitated a minute inspection of the whole interior of the hive; whereupon it was discovered that the combs were universally loaded with the pollen of flowers. This clearly demonstrates, that it agrees with results from other experiments directed to the same point that the pollen of flowers, or bee bread, is designated for the larvæ only, and that perfect bees do not eat it; hence it is easily seen why an old hive of bees becomes so heavily laden with that article of food, a superabundance of which is worse than useless to them, and for which, I think I have discovered a remedy, but cannot enlarge in this place.

But another fact, not entirely useless to the apiarian, has developed itself, corroborated by other testimony, which is this: Notwithstanding the queen leads out the swarm from the old stock, yet the bees usually lead the queen after they are out. True, indeed, the bees will return to the parent hive in a few minutes, unless their sovereign is heard in the air. I have known many swarms to alight, cluster in a body and remain several minutes for their mistress when I stood very near them; she is rather shy, and seems inclined to conceal herself from human observation, extremely timid, and a little jealous of being caught. It is believed that her timidity is the cause of her indisposition to sting when caught. I never could discover in her the least hostile feeling except when conflicting with one of her own species. I have been unable hitherto, in any trial, to excite her anger; her whole object seems to be to make her escape.

In this experiment, the queen was suspended on one side of the hive against the glass, the bees clustered in a body on the opposite side of the hive; some twenty or thirty minutes after the bees were hived, I found many of them clustered and clustering about the entrance of the hive, on its outside. On opening the door, I found but two bees with their sovereign; I immediately brushed all the bees into the hive, and confined them therein, with the expectation that when the bees found their queen was not with them, nor any probability of her coming, they would grow restless, and run around the hive to find their way out, and would thus come across their sovereign; they did so, and in the course of an hour I found her whole colony clustered around her.

Now as I had observed all the material facts in the case, for twenty days, and observing also their perfect negligence and inactivity ten days after the bees had cleared the hive of their lifeless queen, I determined to let the swarm perish in their own way. But as I was looking into the hive, I discovered through the glass a moth miller attempting to lay her eggs in the combs without the least resistance on the part of the bees.—This discovery inspired my mind with new resolutions. That the bees must inevitably perish by the moths—the besom of destruction—was so repugnant to my feelings, that I determined to advise with that worthy gentleman, Rev. W. C. Fowler, Professor of Natural History, in Middlebury College, now Professor in Amherst College, Massachusetts, who suggested the propriety of supplying them with a queen. But the season had already advanced to August 5th, full two weeks after the close of the swarming season, so that no young queens could be caught, and I had not taken the precaution to preserve any exta queens this season—hence a good old hive of bees must be sacrificed in order to preserve the one I had been experimenting with. But go they must, for I never hesitate or refuse to sacrifice a good swarm of bees, if one fact, ever so minute, can be discovered by suffering such a temporary loss. The hive selected, was taken from the stand at noon-day; I inverted it and took out all the comb, honey and bees, (the bees went into the adjoining hives) this done, I selected brood comb of workers only, containing eggs, larvæ, and chrysalises, in all their stages, placed the comb carefully in a drawer, in its natural position, and inserted the same into the chamber of the hive, so that the bees could repair their loss by making a queen in their own way.—They did so, and on the eighth day they had a queen; and here I ought to mention the fact that the bees, on the third day after they were supplied with brood, resumed all their natural habits, labored with seeming redoubled vigilance, obtained a complete victory of the moths, expelled every one of them from their tenements and protected their hive as usual.

In this experiment, I was a little disappointed in one respect only. I supposed the bees would enter the drawer, erect a cell, and raise their sovereign in the chamber; but instead of doing this, they made their arrangemen's below, where the main colony were located, carried down the larva, where it was more convenient for them to exercise their peculiar instinctive wisdom among new combs of their own manufacture.

On expelling the bees from the combs on the 21st day of August, (queen eight days old) I found eggs in some of the cells, and the bees changing them into brood comb as fast as possible. Notwithstanding their entire overthrow was for awhile predicted, yet by giving them grubs of workers, they have supplied themselves with a queen, which has inspired them with new ambition, and I have the satisfaction of seeing them replenish their stock with young bees, which was already somewhat reduced by the loss of many of their companions being caught by the birds and lost by other casualities, and the bees in as good condition for wintering as any of my hives. Respectfully yours,

Middlebury, Vt. John M Weeks.

Watering Places.

Every farmer should endeavor to have a good watering place for his stock. Some indeed have great inconveniences to contend with in this respect; but in most cases where the watering place is bad, it is owing to sheer negligence. Stock of every kind need a good supply of pure water, and if they do not have it they cannot thrive, nor be kept in good condition. In order for creatures to drink conveniently, the water should be in a trough elevated a little from the surface of the ground. When the water is in a brook, pond or spring, the ice and snow generally accumulates around it to a great depth, and if it is shovelled out, it is liable to be blown in again in a short time. When animals have to stoop down and then with difficulty reach the water, they frequently get much less than they want, as it is attended with great exertion. Some young or weak ones are often driven away by the stronger, so that sometimes they do not get any water.

In most all cases the watering place, even when it is a poor one, is where the water descends, and by carrying it in a spout a short distance, it will attain a sufficient elevation, and may then be discharged into a trough; that will be a convenient place to accommodate the poor thirsty beasts, who will amply reward their owners for the trifling expense. In many cases water can be conducted in a spout from a spring or brook in the side of the bank, so as to prevent its freezing in the winter, until it is high enough to go into a trough. Now is the time for farmers to attend to this business who have not already done it.—*Yankee Farmer.*

The Bush Cow.

A remarkably curious animal has just arrived in this country from Sierra Leone, which is attracting a good deal of attention among naturalists. It resembles in form a common cow, but is thinly covered with coarse hair of a dirty yellow color with tufts of the same hanging down at equal distances over her broad pendulous ears, and has altogether a most singular appearanne.—It comes from the interior of Western Africa, and is but little known even to the natives, who call it the Bush Cow. No other specimen has ever been brought to Europe, nor are the colonists of Sierra Leone at all acquainted with it, and it is believed to be quite undescribed. It has been deposited for the present at the Surrey Zoological Gardens.—*London Farmers' Magazine.*

Experiment to Raise Lambs Twice a Year from the same Ewes.

SIR—Having heard that the pure bred Dorsetshire ewes would infallibly bring lambs twice in the same year, I purchased, for the purpose of making the experiment, seven ewes on the 2d of December, 1825. They were all in lamb, and by the 28th of that month had yeaned nine lambs. The first of these ewes lambed the second time on the 2d day of July, 1826, the remaining six by the 26th of that month; they brought seven lambs.—By the 14th of March, 1827, five of these ewes had lambed the third time, the remaining two on the 29th day of April, and produced, at the third lambing, *twelve healthy lambs.* Thus these seven Ewes, in 17 months from the time of their purchase, brought me 28 lambs, which were all reared in health, and were sold, the first lambs for a guinea and a half each, the second lambs for a guinea each, and the third were sold with the ewes as couples. Besides the 28 lambs, I had a fleece of wool from each of the ewes at midsummer. —*Farmers' Cabinet.*

Lime your Orchards.

The effect of lime on orchards and on grounds in which fruit trees are planted, is stated to be very beneficial; it improves their health and promotes their growth and it is said to improve the quality of the fruit. The food or pasture of the trees is increased in quantity, and improved in quality by the application, and it is doubtless an important agent in destroying the grubs and worms which are so destructive to fruit trees by the wounds which they inflict, as well on the tender, absorbent fibres of the roots, as on the branches and trunk.

The good effects of lime on apple and peach trees is perceptible in a short time, and it is believed equal benefit will be derived from its application, by all other kinds of fruit trees.

Let us try it without delay, for it is universally known that good fruit is never produced by an unhealthy tree. —*Farmers' Cabinet.*

HOG PENS.

Every one that keeps hogs should see that they have a good warm, dry, comfortable pen for cold weather; then if they are well fed, they will thrive through the winter and consume less food than those kept in a cold place. If hogs are kept cold, and wet, and filthy, as many are, they will eat a great deal during winter, and perhaps be no larger in the spring than in the fall. There is often a great waste of time and food for want of a little care. There should be a warm, dry apartment, with a good bed of straw, leaves, or the like, and the stye should be so constructed that this place can be kept in a comfortable state, and the manure removed as it accumulates, that it may not be carried into this part, nor into the trough, nor stick to the hogs and dry or freeze on them. Rotten wood and charcoal are good for hogs when they are confined, and they should now and then have a little pure earth.—*Yankee Farmer.*

See to your Cellars.

Every farmer should be careful and have his cellar warm enough to save his vegetables; not merely warm enough for a moderate winter, but for the coldest; be always prepared for the worst for ye know not when it will come. You may consult the signs of the times and expect a mild winter, but all such signs will fail when old Boreas comes with his terrible reign, and the frost is creeping into your potato bins. Scarcely a very cold winter passes without a great loss of vegetables, for want of proper care in securing cellars.—*Yankee Far.*

Among the curious and useful things of the age is the piggery of E. Phinney, Esq. of Lexington. This gentleman is clerk of one of the county courts of Middlesex, and also one of her best farmers, as his abundant crops testify. Though educated in the profession of law he loves the *natural* employment. On his farm is to be found a variety of excellent fruit, in the highest state of cultivation; and the most valuable kinds of grain, especially wheat, are not strangers to his soil.

But the piggery! I wish I could describe it as it is; but I cannot. Here are one hundred and eighty as fine looking porkers as ever walked, young and old, in one family. I learn from Mr. Phinney that he obtains manure enough annually from his hogs to cover the expense of keeping, up to the time of slaughter; consequently the pork must be a net income. Suppose he kills one hundred annually, leaving eighty for *seed*, which will be sufficient—they weighing four hundred pounds to the hog, which is an average weight, (of which you would be convinced at sight,) they will make forty thousand pounds of pork, which at ten cents per pound, will give the handsome sum of four thousand dollars, a pretty fair income for one branch of *husbandry*. And there is no other magic here than that of *economy*.—These hogs are the c oss of the Berkshire and Mackay breed.

A LOOKER ON.

Lexington, Nov., 1838. [*Yankee Farmer.*

Winter Prolific Oats.

We were highly gratified the other day (says our Retford correspondent) on witnessing a new kind of oat on the farm of Mr. Holmes, at Ranby. In the autumn of 1836, one bushel of these oats were sown which produced 38 bushels; of these, thirty-seven bushels were sown at Michaelmas last, on eleven acres of land, and although they were twice eaten down with sheep during the present spring, they are now likely to yield full eight quarters to the acre. The land on which they have been grown is light forest land, to which no extra management was given, and the straw in a general way is nearly five feet high. Besides, the produce must be great, as we counted in many instances more than thirty stalks from one grain, all of which were very heavy and remarkably well topped. We should not much wonder if this oat becomes general on many soils, as, from what we have seen, it is more likely to answer the purposes of the agriculturist than any other we have latterly been acquainted with. Mr. Holmes's field has been reaped in prime condition during the present week.—*Doncaster Gazette.*

Food for Plants

Vegetable mould or earth when brought into a state of solution furnishes food for plants, and enters into their composition and structure; plants furnish food for other plants and for animals, and become animalized by the process of digestion; consequently animals are manfactured out of vegetables by a process of which we are ignorant; and when animals die and are decomposed by the agency of heat, moisture and air, they are reduced again to the elements which constitute the food of plants, and so proceed, on the same round again of producing a new generation of plants and animals; and this otary system has been in operation from the creation of the world to the present time, and so will continue till time is no more; the quantity of matter always remaining the same, though its form and combinations are constantly undergoing a change.—*Farmers' Cabinet.*

J. A. Graves, of Sunderland, states in the Vermont Chronicle, that he has raised on one stalk five large ears of corn, seventeen hundred and seventy-two kernels.

The Magazine of Horticulture,

BOTANY and all useful discoveries and improvements in rural affairs, a monthly publication, by Hovey & Co. Boston, price three dollars a year.

This is the most popular, scientific and practical work of the kind in the United States. It contains numerous original communications from eminent American Horticulturists, and valuable selections from the European Magazines, notices and descriptions of new and beautiful plants, flowers, fruits and vegetables, with observations on their history, use, propagation and culture, directions, with plans and engravings, for constructing and managing greenhouses, hothouses, frames, &c. with particular instructions for the propagation and culture of green house plants, and the management of plants in rooms. An account of the proceedings of the Massachusetts and other Horticultural Societies, and descriptions of the principal gardens, nurseries, greenhouses, &c. in the United States.

This work should be read and patronised by every lover of Horticulture and friend of improvement. The fifth volume will commence with the ensuing year. Specimens may be examined at the Rochester Seed Store, where subscriptions are received by

Dec. 8.—3t REYNOLDS & BATEHAM.

Wheat Farms for sale in Western New-York,

IN the counties of Monroe, Orleans, Genesee and Erie—varying in quantity from 50 to 300 acres each—under a good state of cultivation and improvement, with suitable buildings, fences, &c. watered with durable streams, and most of them have wheat on the ground. Five to eight years credit can be given, if wanted, on the whole principal sum, with annual interest. These farms are situated in the midst of a rich agricultural district, unsurpassed in the richness and productiveness of its soil; lying on the banks of the Erie canal, and in the vicinity of Rochester, Lockport and Buffalo, affording at all times a ready and sure market for all the articles of produce, which at present prices amply reward the husbandman and enables him with a few crops to pay the first cost of his lands. A favorable opportunity is here presented to the enterprising farmer who would wish to obtain a good farm on liberal credit, with sufficient means to secure the payment of one-third of the purchase money. Letters (post paid) promptly attended to.

Rochester, N. Y., Dec. 8, 1838.—4w JOHN C. NASH.

Chinese or Tree Corn.

A SMALL lot of this celebrated new variety of Corn just received from Mr. Thorburn, for sale at New York prices, by

Nov. 24. REYNOLDS & BATEHAM.

Rohan Potatoes.

THE real article, just received at the Rochester Seed Store.

REYNOLDS & BATEHAM.

Rochester, Nov. 3d. 1838.

Genuine Morus Multicaulis.

THE subscriber has still for sale, one thousand genuine Morus multicaulis, of thrifty growth and untrimmed. They are choice trees, selected for their size, and will afford a large quantity of cuttings.

ASA ROWE.

Greece, October 27th, 1838.

Seeds for 1839.

WE are daily receiving our fall supply of SEEDS for the coming season and advices have just been received from London, of the shipment of a large invoice of English seeds of the present year's growth. They will shortly be received, and we shall then be prepared to supply dealers and others by wholesale and retail, with such articles, and at prices as cannot fail of giving the fullest satisfaction.

Orders from abroad where the articles are to beforwarded by navigation, should be sent as soon as possible. Those of our friends who have already favored us with their orders may rest assured that their wishes will receive due attention. REYNOLD & BATEHAM.

Rochester Seed Store, October 27th, 1838.

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

Rohan Potatoes.

THIS new and extraordinary variey of the potatoe, was introduced into this country from Switzerland two years ago.

The following are among the accounts which have been published saspecting its wonderful qualities.

A writer in the Genesee Farmer says, one pound of seed planted in his garden, produced 136 lbs. 3 ozs.; and 45 lbs. planted on 24 rods of ground produced 58 bushels, being three times as many as the common kinds produced on the same space and quality of ground.

A gentleman in Connecticut, from 13 ozs. of seed produced 2½ bushesls of potatoes, which weighed 144 pounds, while other varieties, with similar soil and cultivation, did not produce more than half an ordinary crop, owing to the extreme dry weather. It is stated that some of these tubers sold for $1 each, at the New Haven Horticultural Fair. Judge Buel (in the Cultivator) says we have cultivated them two seasons, and feel justified in recommending them as a valuable acquisition in our husbandry.

First—Because their quality for the table will justify it. If not superor they are good. The flesh is yellow, solid, and of good flavor.

Secondly—Because they admit of a great economy in seed; two, eyes sufficing (and many of the tubers have 30 to 40 eyes) to plant a hill, and three or four bushels to plant an acre of ground.

Thirdly—Because they require comparatively little labor in harvesitng, a man being able to dig thrice as many of them in a day as of ordinary kinds. The tubers are very large, 110 of the largest of our crop completely filling a flour barrel. 27 bushels were dug in our presence in one hour, (the tops being pulled,) by one man at moderate labor.

Fourthly—Because they yield an abundant crop—from 85 rods of ground were gathered 175 bushels, while our common kinds did not give us half a crop. One case has been stated to us, of a single potatoe producing a bushel, and another of its having produced a barrel, at harvest.

☞ They are for sale at the Rochester Seed Store, by

nov 17 REYNOLDS & BATEHAM.

Chinese Morus Multicaulis, &c.,

At the Linnæan Gardens, Flushing, New York.

50,000 SPLENDID trees of the genuine Morus multicaulis are yet remaining for sale at moderate prices, according to their size, and also cuttings of the same. None of the *Aumbug* kind are sold at this establishment. Also 20,000 trees of the Morus Expansa, which has very large leaves, greatly loved by the worms; it is very hardy, and yields silk of the first excellence. A great supply of the Moretti, or Alpine Mulberry, the Canton, Dandola, Broussa, Asiatic, Pyramidalis, Rose of Lombardy, Morus Alata, and other varieties. Also, Fruit and Ornamental Trees, Plants and Seeds of every kind, and an immense stock of Bulbous Flower Roots, just arrived from Holland.

Silk Worms' Eggs of every kind at the lowest prices, and White Italian, Canton and Moretti, or Alpine Mulberry Seeds in any quantity.

The Morus Multicaulis trees raised here have one-third more joints and buds than southern trees, and of course are worth 50 per cent. more for propagation; and the wood becomes as mature and perfect on the high exposed position our nurseries occupy, as at any place in the Union. Also, Fruit and Ornamental Trees, Bulbous Roots, Green House Plants, and Seeds of all kinds, for sale in large or small parcels.

Priced catalogues will be sent to every applicant, and orders per mail will be executed with as much precision and despatch as if the purchasers were present, and will be packed so as to be sent to the remotest region with safety.

nov 17-8t] WM. PRINCE & SON.

From the Wisconsin Culturist.

W. P. PROUDFIT, Esq., Editor W. Culturist—Dear Sir: We have perused a letter from Lucius B. Allen, Esq. accompanied by an editorial comment, which without proper explanation is calculated to mislead the public. It appears that Mr. Allen received seeds from Dr. Stebbins, of Northampton, Mass., which he deems the *Morus multicaulis*, and from which he states he has raised 30 to 40,000 trees. We have simply to say that there never has been one ounce of genuine Morus multicaulis seed sold in the Union, and that all the trees raised from seeds *professedly* of the Morus multicaulis, have proved to be none other than an improved variety of the White Muberry, with much larger leaves than the White Mulberry, but possessing no resemblance to the genuine Morus multicaulis. All such applications of the term "Multicaulis," meaning *many stalks from one root*, are totally improper, and any such terms as Alpine Multicaulis, or Canton Multicaulis, are delusive. The Alpine is the Moretti Mulberry of France, and was originated there from seed, and is *not known in China*, and all efforts to import the genuine Multicaulis from China have as yet proved abortive, and there exists no proof whatever that it is to be found there, although in all probability it does, but at some locality not yet ascertained. The genuine Multicaulis was brought from the Phillippine Islands to France, and was first imported into America by ourselves. It is time these errors should be put a stop to, as thousands of dollars have been already lost by persons cultivating and propagating the wrong tree. The seed from Dr. Stebbins no doubt produces valuable trees, but let them be called by their *true name*, and not by one totally distinct, and the use of which may mislead people at a distance, although here it cannot. In the whole village of Northampton there were not 50,000 trees of the genuine Morus multicaulis raised the present season, but they have there many other fine varieties in abundance [nov 17-8t] WM. PRINCE & SON.

Monroe Horticultural Garden and Nursery,

GREECE, MONROE COUNTY, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with trees and plants in different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Peonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1838. ASA ROWE.

much more has been done than in any other parts of the country. A considerable stimulus has been given to the business, in some of those states, by the liberal bounties upon silk produced within their respective limits. A large proportion of the late crop of cocoons was reserved for eggs for another year; and even now the demand for eggs is almost as great as that for mulberries. The experience of this year has satisfactorily proved that even from trees, the growth of cuttings and layers planted in the spring, worms may be advantageously fed the ensuing summer. It is only necessary to retard the hatching of the eggs by placing them in an ice-house, which should be done before the warm weather in the spring comes on. By this means, they have been kept till midsummer. Under any circumstance, the hatching may very properly be delayed till the early part of June, which is probably as soon as worms should be brought out even in Virginia. The cold, wet weather of May, which is frequently a disastrous period to the young worms, is thereby avoided; and the natural time of hatching is only postponed about three weeks. Whether they can, for a number of years, consistently with the health of the insects, be prevented from hatching until the latter part of July, may be regarded as doubtful. The practice is so contrary to nature, that it will not be at all surprising if the effect should prove unfavorble. Neither would any necessity exist for it, if the culturist would reserve a small number of standard trees or roots, and make use of the two crop worm for his second and third crops.

I have no information which would enable me to state with precision the quantity of silk that may be produced from an acre of ground. During the past season, one gentleman in New Jersey obtained from the sixteenth of an acre, a product at the rate of 56 pounds per acre, from trees of the first year's growth. Had the trees been a year older, the quantity of silk would no doubt have been fully doubled; and might have been still further increased by successive crops. The cocoons of this year were almost invariably firm and heavy; and I heard of no worms that fed longer than twenty-eight or twenty-nine days; the usual period of their lives being thirty-five days. This abridgment of the ordinary term of their existence, is to be ascribed to the high temperature of the summer; for we know that, under different circumstances, it is sometimes prolonged to forty days. The past season, hot and dry as it was, appears to have been very favorable to the health of the worms. I heard, on respectable authority, that a culturist in Delaware had fed 150,000 with the loss of not more than twenty. Among all that I saw, some of which were a good deal crowded, I observed no symptoms of disease, and heard of none prevailing elsewhere. One or two facts that came within my knowledge, showed that much care is requisite in the treatment of eggs when the hatching is to be postponed. It is acknowledged by all, that it is important to keep them dry; and to guard against the least admission of moisture, some persons put them in bottles and seal them air tight. Whenever the eggs remained in this conditiod for any length of time, their vitality destroyed; while others of the same parcels, but treated with less care, hatched without loss.

Without intending to make any invidious comparison, and premising that there were many places where the silk culture was said to be thriving, which I did not visit, I have no hesitation in saying that there was more doing at Burlington, New Jersey, considering how recently the business has been started there, than at any other place which came under my observation. A considerable number of persons were engaged in feeding worms as well as in raising trees. A few extensive cocooneries had been erected, one of which was large enough to accommodate about a million of worms; and several others from one to two or three hundred thousand. The soil in the vicinity of Burlington, is light and sandy, and well adapted to the growth of the multicaulis. Indeed the greater part of New Jersey is admirably suited to the purpose; and the business is so rapidly spreading, that in a few years, that state will probably be much in advance of any other. Within a few years the improvements in the construction of cocooneries, have contributed greatly to the facility of feeding worms.—The plan of those at Burlington, struck me as being rather superior to any I saw elsewhere. The necessity of handling the worms is entirely dispensed with by the use of hurdles of net-work; at the same time the cleansing of the shelves and the removal of the litter are more easily effected. When it is time to change them, another hurdle is laid on the one containing the worms, and fresh leaves are sprinkled over it, which are always cut up by running them through a cylindrical cutting box. In a few hours, the worms attracted by the fresh leaves, get on the upper hurdle, when the lower one, containing the litter, is removed. In this manner, a large number of worms may be cleansed in a day, by providing extra hurdles. A better fixture for the accommodation of the worms in spinning, has been latterly introduced. On the lower side of the shelf immediately above, which is not more than twelve or fourteen inches distant, strips or lathes, about two inches wide and three inches from each other, are fastened at right angles to the range of shelves, to which the worms mount by very simple ladders, and spin their balls along the junction of the strips and floor. This mode adds greatly to the convenience of gathering the cocoons, and the floss is removed from them free of the litter which attends the use of brush or dried leaves. A room thirty feet wide, will admit of four ranges of shelves, three feet wide, leaving an aisle, between each range, and also between the outer ranges and the walls, of three and a half feet. The number of shelves in each range will be in proportion to the pitch of the room; say six shelves for a room, nine or ten feet high. Each hurdle is three by four feet, and will accommodate a thousand full grown worms. On this plan, a room of a hundred feet in length by thirty feet in width, with a pitch of nine or ten feet, will accommodate, without crowding, about half a million of worms at a time.—But in a cocoonery, near Frankfort, in Pennsylvania, which was not of much more than half these dimensions, six or seven hundred thousand worms were fed in June last, which spun well. They were, however, evidently too much crowded, as was shown by the small size of the cocoons; and had not the season been of the most favorable character, the whole brood would have been in danger of being swept off by an epidemic. In a small room at New Haven, in a house occupied by a Frenchman, which did not exceed ten feet square, he had successfully fed forty thousand worms, without the appearance of any disease among them. I saw a number of the cocoons, which were large and firm.

Many persons have amused themselves, and the public too, by making calculations of the great profits of the silk culture. It may be no difficult matter to state with tolerable certainly how many good cocoons will yield a pound of silk; but I think an error has been frequently committed by estimating the product *per acre*. Of mulberry leaves, as well as everything else, the crop will be very variable, and depend on the quality of the land. If worms can be preserved exempt from disease, and good cocoons can be obtained from them, the number that an acre of ground will support, at the usual prices of land in our country, is a matter of very subordinate interest. It is only important when land is worth from one hundred to three hundred dollars per acre. When the value does not exceed five or ten dollars, as is the case with most of our lands, it is better to estimate the profits of the culture by the number of worms that may be fed, than by the quantity of land that it will require to supply them.

While so much is doing in some of the states to the north of us, for the advancement of the silk culture, scarcely anything has yet been attempted in Virginia.—The attention, however, of some individuals, has been directed to the subject; and an interesting experiment in feeding worms has recently been detailed in the "Farmers' Register," by a gentleman of Brunswick. A very large cocoonery has been fitted up at Fredericksburg, which will probably be filled with worms next year. Other gentlemen are making arrangements to enter upon the culture. During the ensuing season, it is hoped that interesting results may be established by various persons. But, unfortunately, almost every tree grown in Virginia and North Carolina, with the exception of those retained to propagate from another year, has been bought up, and will be taken to Pennsylvania or New Jersey. The Virginia and Carolina trees have a decided superiority in the northern markets, and are sought after with avidity; a fact of which the cultivators here are perhaps ignorant. Southern trees are mostly produced from cuttings, while those of northern growth are raised from what are called *layers*—that is to say, a whole plant, both root and stem, is laid horizontally in a furrow, and covered over with earth. The young shoots sprout up so thickly that they make a spindling growth. Plants from cutting, on the contrary, having more distance, throw out a number of side branches, and furnish a much greater supply of wood, which, besides that it is better matured by our southern sun, adds considerably to the market value. It would be desirable to know what number of trees have been grown in those two states during the present season. It will probably not fall much short of half a million; and next year, the number will no doubt be two or three times as many. But as long as we send them abroad, we are doing nothing towards the advancement of the silk culture in our own state. And if there be any state in the union that would be more benefitted by the introduction of this culture, allowing it to be, as is contended, both practicable and profitable, or whose soil and climate are better adapted to it, or where it can be prosecuted with greater economy in reference to labor, I should be at a loss to point it out. We occupy that position in regard to climate, which is too far north to admit of ours being a planting state; and too much to the south to be a first rate grain growing or grass growing country. We have extensive tracts of impoverished land in which the mulberry will flourish without difficulty, and where nothing else will grow. Our dry and long continued summers are eminently favorable to the health and prosperity even of successive crops of the silk worm. We have in almost every family a number of unprofitable hands, either too young or too old to be put to constant employment; and the more intelligent portion of our colored population, remarkable as they are for their tractableness and powers of imitation, would soon learn to conduct all the operations of the cocoonery with neatness and skill.

Many of the states to the north of us have encouraged the introduction of the silk culture by legislative bounties; and I am convinced the wisdom of this policy will be justified in due course of time. If from causes already pointed out, but little has yet been accomplished in the production of the article thus encouraged, yet the ground work has been laid, and the superstructure will be erected upon it. The seed has been sown, which will produce, some ten, some twenty, and some possibly a hundred fold. It will, however, necessarily be a work of time. It may be another generation, and yet another perhaps, before it is established on a durable basis. But with a climate like ours, and with a species of mulberry superior to any hitherto known, the energies of the Anglo-Saxon race will eventually command success. The mental resources, the quickness of perception, the determined perseverance, which constitute the distinguishing attributes of this people, will enable them to triumph over every difficulty, and achieve all but impossibilities.

T. S. Pleasants.

Goochland, Sept. 15.

From the London Farmers' Magazine for October.

On the Best Means of Permanently Improving the Class of Clay Soils.

Clay soils are distinguished by their adhesiveness. They stick to the feet when damp, they imbibe moisture slowly, but do not transmit it freely for the use of plants, and when strong clay soils are brought quickly from a wet to a dry state, they approach to the state of bricks previous to their being burned. Clay soils are tilled with difficulty when too dry, and when too wet this operation has the same effect as the tempering of clay has, in the art of brick making.

The tillage of such land in a proper state is therefore of the greatest importance, and this is best performed when it is neither too wet nor too dry.

Poor thin clays upon a retentive subsoil are the most unprofitable; the expense of their cultivation, under the present system is great, being frequently equal to the value of the produce and sometimes far above it. Their natural produce is coarse grass of very light value, fit only for young beast.

Clay soils are best calculated for the production of plants that have fibrous roots, particularly wheat, beans, oats, vetches, clover, cabbage, grass, &c.

While the light sandy soils have been greatly improved by the adoption of a new system of culture, the poor clays remain in the same state they were in a century ago, without any increase to their productiveness; indeed they are rather in a worse state than formerly. It is therefore supposed by some agriculturists, that as there have been no improvements in the clay soils, while there has been so great an increase in the productiveness of sandy soils that the clays are not susceptible of improvement with the least chance of a proper return.

There is no doubt but a better system could be adopted for the cultivation of such strong clay soils than that which is pursued in the common fields, and on the clays of Bedford, Huntingdon, Cambridge, and other counties on the malm, gault, oak-tree, clunch, Oxford and blue lias clays.

The course of cropping adopted in the common fields and on thin clay, is summer fallow, if dunged, wheat, and then beans; or without dung, barley, then oats, then fallow again, and this is the same as it was 100 years ago.

The chief cause of thus neglecting the clay soils is the difficulty and expense of cultivating them and of converting them into pasture, after having been long kept under this system of arable cultivation. It is difficult to convert such land into good pasture, but it has been overcome and the best and most profitable results have followed.

There is a much greater difficulty in getting a poor, cold, clay farm let, than one consisting of a poor sandy soil. The capital and ability required for the former being not only much greater, and of a higher order, but the risk is also much more in cultivating the clay, than the sand, as the mode of improving the land and securing good crops on sandy soils by claying is easy and certain, and the turnep and sheep husbandry cannot be adopted on clays.

Besides, the system of cultivating light sand or loamy soils has been so long established, and the Norfolk or four-field system has now become so much the beaten track, that it would be difficult for the farmers who have

been brought up to it, to leave it off, although a better one were shown them.

The turnep, and sheep system, however, cannot be adopted on clay soils, till they are completely drained and subsoil ploughed, and till sand or light and porous matter be added to alter their texture.

Some new impulse must be given to agricultural speculations before the cold wet clay soils will ever attain that degree of improvement which they are capable of, and which has been effected in the sandy and peaty soils.

The landlords should encourage tenants with capital and talent, by letting farms at low rents under improving leases, similar to the building leases granted in great towns; and binding them by certain covenants to improve the land by complete subsoil drainage and the application of alternatives; and by a proper mode of culture, to convert a certain portion of the arable land into pasture under a particular mode found to be the best and surest for effecting its amelioration. Permanent improvement undertaken by an intelligent and industrious farmer under the security of an improving lease is the best and most profitable mode of permanently improving land.

Perhaps Lord Kames's mode of letting land for this object is the best, with additional covenants binding the tenant to improve, by altering the texture of such soils as would be improved by it. It ought ever to be kept in mind, that the only true and systematic stimulus to improvement of any kind, is the certainty of profit in the outlay of capital. This is the main spring to all our exertions; without the certainty of occupying his improvements for such a length of time as will enable him to reap the advantage of his outlay, we may be assured that no man will either invest his own capital, or be inclined to borrow money to be laid out in the improvement of another man's estate.

There is no doubt, however, but thin clay soils could be easily improved, and, perhaps, in a much greater degree than the sandy soils have been during the last 40 years; and the surface may yet be seen clothed with a rich herbage which shall vie with that of the other soils in producing the best cheese, beef, and mutton.

Clay soils will produce pasture just in proportion to the quantity of decaying active vegetable matter in their composition. If this be abundant, the crop will be rich and luxuriant; and the decaying fibrous roots will form a dry, porous soil, giving a sufficient depth for the rain to sink through the subsoil, where it will run off by the furrow drains. If there be little vegetable matter in the soil, the moisture will make the earthy matter in it collapse and adhere together; and it will form a cold, wet, sterile clay, producing little else but carnation grass of little value.

Pasture on clay soils should never be converted into arable culture, unless the application of skill and capital will not only repay the additional expense of the culture, but also tend to increase the permanent productiveness of the soil. Without a proper application of skill, capital, and industry on such land, the converting it into arable culture will only tend to diminish the produce, if the free produce under the artificial culture falls short of that which nature itself afforded.

Much may be learned from the practice of market gardeners, in the neighborhood of London and elsewhere. They have two methods of trenching their land. When the soil and subsoil are good to a great depth, they turn the surface under and fetch up a fresh spit from below to constitute the surface for so many years; but when the subsoil is poor or strong clay, they bastard trench it, as they call it; that is, they throw the surface spit forward, always keeping it uppermost, and dig the subsoil by turning it over in the trench without moving it from its place.

Their object in thus trenching their clay soils is to get depth for the rain-water to descend, and to give a greater depth of moisture to the roots of plants in dry weather, and for the superabundant moisture in wet weather to descend below the roots of plants, and run off to the drain.

If we perfectly drain thin clay soil by furrow draining, and deepen the subsoil by trenching with the spade or the subsoil plough, making it pervious to the moisture which falls on it, that it may immediately sink to a depth below the reach of the roots of the plants, the cultivated surface will be dry; and if we reduce the tenacity of the soil by applying to it those light or sandy substances, which, when well incorporated with it, will make and keep the soil permanently porous and friable, then the land which before produced only a poor crop of carnation grass, or if arable, of oats, will now produce an abundant crop of wheat, beans, oats, clover, and even turneps; and if properly laid down, and full of manure will form a rich pasturage for any kind of stock.

When clay soils have dry pervious subsoils, they become darker in color from the repeated application of manures, and under a proper system of cultivation they lose their adhesiveness, and become a loamy soil, producing the most fruitful crops of wheat, beans, clover, vetches, cabbage, and naturally produce the best and richest herbage for dairy cows. The milk from cows fed on such pasture produces more cheese and butter than the milk from cows fed on a sandy soil, and of a better quality.

Any thing which will produce permanent friability in clay soils, such as sand, lime, burnt clay, loose light vegetable matter, or long unfermented manure, will alter its texture and improve its quality.

When tenacious soils are completely subsoil drained, and a system of deep or subsoil ploughing is adopted every time when the land is in summer fallow, if the soil be deepened and the subsoil made more porous; and if never ploughed when too wet, and a full portion of vegetable manure be given to the soil, and well mixed with it, a mechanical effect will be produced, which will change the nature and texture of the soil, and give to it that friability which is so essential in all productive soils. The rain that falls on it will now percolate through it to the depth of the new formed subsoil, and thence to the furrow drains.

The soil now receives the circulation of the air, which is carried on by the rains filling up the interstices which the air previously occupied, and the complete drainage draws off all the superabundant water as it falls. By this operation the earth again receives a fresh supply of air from the atmosphere, which promotes a chemical as well as mechanical action in the soil, and hastens the decomposition of the air and water, as well as the vegetable and animal manure it contains, and thus a liberal supply of the nourishment necessary for the growth of plants is obtained.

Soil that is principally composed of calcareous matter, in minute divisions, becomes a most tenacious stubborn soil; and, under certain circumstances, as sterile as the most worthless clay. Calcareous matter, therefore, although reckoned a valuable constituent in a soil, becomes an evil when it composes the greater part of it.

Calcareous clay, when thoroughly dried, falls to pieces like burnt lime, whenever it is again wetted. Every poor clay soil may be much improved by paring and burning the surface, after it has been completely drained.

This is the first step that ought to be taken towards ameliorating such a soil, and the more claycy the soil is, the deeper ought the soil to be burnt. When the burnt surface is mixed with the soil to the depth of the furrow, it acts as a coarse sand, and makes it more friable and porous, by converting the matter, which was before damp and adhesive, into a dry, friable, warm soil, permanently improved and capable of producing luxuriant crops of every kind.

If we can get depth and friability to the subsoil of strong adhesive clay, we thereby prevent stagnant water from injuring the roots, and give to the plants the liberty of sending their roots to a greater depth in search of nourishment.

In all rich soils there is vegetable matter in every state of decay, and the greater this portion of decaying vegetable matter is in strong clay soils, the greater is its productive powers. Besides this, decomposing vegetable matter will tend to keep strong clay land loose, friable, and porous.

Modes and Profits of Strawberry Culture.

Mr. Buel—Having noticed an article in your August number, on the cultivation of strawberries, to which my attention has been directed for a number of years, and wishing that the public should receive all the light upon the subject which can be diffused, induces me to communicate what little knowledge I posses of the matter. The kind generally cultivated on Long Island (where I reside) for the supply of the New-York market, I believe to be the early scarlet, and of these I have at present about three acres under cultivation. We generally transplant, and form our new beds in the beginning of May. Formerly the universal practice was, to transplant in rows from two to two and a half feet apart, the plants single from one to one and a half feet from each other in the rows. My present practice, and that of many others, is to plant them in hills, about three and a half or four feet asunder each way, placing four plants in a hill, two and two together, about three inches apart. By planting in hills there is a great saving of labor, for it takes less time in transplanting, they are more easily kept clean by running the cultivator through them both ways, and there is less labor in hoeing; whereas, by the old method, when planted close, the cultivator could not be used in them at all, or at most only one way. The cultivator is run through them as late as it can be done without serious injury to the runners, hoeing them each time, and it is seldom, when it is judiciously done, they require it over three times. I have always, in my practice found them when properly managed, to cover the ground with a sufficient number of plants to produce a good crop of fruit the next season. A piece covering less than half an acre, of last year's planting, produced this season over 3000 baskets, containing nearly a pint each, which were sold in the New-York markets for $200. This, however, is an uncommon yield, and is seldom equalled or excelled. New beds almost invariably yield better than old ones, and produce larger fruit, although apt to be sandy after showers. It took nearly two acres of my old beds to yield the same quantity the half acre of new did. The soil I prefer for strawberries, is light sandy land newly cleared, on which no animal or vegetable manure has been used. On land of this kind, which has been prepared by previous crops, and on which weeds have not been suffered to go to seed and take possession, they will last four or five years, while on old land they are seldom profitable over two, and often but one.

The greatest enemy to the beds is white clover, which in old lands, after the first year's bearing, generally gets possession of the beds and eradicates the plants. Land lately cleared is not often troubled with this grass; the great danger is from sorrel, but this is less destructive. Our beds cover the whole ground; there are no alleys, no clipping of runners, no digging the paths, no burning with straw, as recommended by some gardeners, for it is doubtful whether these operations would answer our purpose; whether they would be profitable and pay cost. At all events, our experience leads us to adopt the plan I have described. The only attention which I have found necessary and advantageous, after the first year is to pull up and destroy the weeds and grass, and to run a light harrow over all beds, early in the spring, when matted too thick with plants. As for manure, it is not customary for us to put any on. I once read an account of plaster being highly beneficial, which I tried, but it failed in improving them. Lime might aid in destroying sorrel, but have not tried its virtue.

Much has been written about male and female plants, and of the necessity of mixing them in the beds to make them fruitful. Now all this may be necessary with some varieties, but with the one we cultivate I can assure you it is not; no cultivator in my neighborhood from which the New-York markets are principally supplied, that I have ever heard of, does it. I once tried an experiment which appears to be conclusive. I planted a small bed in my garden at the time when the fruit commenced ripening, taking only such plants as had good and fair fruit on them, and no others. This bed produced the next year abundantly; they were all female plants, and no males in their vicinity to impregnate them. The male and female blossoms of this variety must be on the same plant, although to the eye no difference is presented in their appearance.

If you deem these remarks worthy of notice, you may insert them in your valuable journal; and if you desire it, I may at some future period describe the manner in which cucumbers, melons, &c., are cultivated among us for the supply of the New-York markets.—*N. Y. Cultivator.*

Blight in Pear Trees, and Remarks on Plums.

Joseph Breck, Esq.—Sir, I have taken the N. E. Farmer for the last eight years, the Albany Cultivator from its commencement, and frequently seen the Genesee Farmer and other agricultural papers and have read all the various articles on the fire blight. From my own experience I am satisfied that not one of the various writers knowns anything about it. When our medical men shall discover the cause and cure for the Asiatic cholera, then and not till then, I fear, will our horticulturists learn the cause and cure of the blight. I have whittled many limbs into fine shavings, dug up a number of trees, examined the roots and shavings as closely as possible with a good glass and am fully satisfied that it is not caused by any insect. One of my trees in the fall of 1837 produced 10 bushels of pears; this season blossomed full; soon after the fruit was formed, was attacked on the body about four feet from the ground; a strip around the body of the tree about 10 or 12 inches wide was entirely killed in three or four days, whilst every limb was vigorous and healthy.—The bark of the body of the tree was coarse and rough. Could that have been done by an insect? I had 50 trees, 25 of which were killed from the seedlings of two years up to those of 30 years standing. I had the Easter Beurre, Bartlett, Passe Colmar, St. Michael, Seckle, down to the most worthless seedling. The disease pays no attention to age, location or quality of fruit. My soil is a sandy loam; a number of the trees stood in the kitchen garden and have been cultivated for 25 years; others stood in the fruit garden, which has been in sward for a number of years. One tree stands within a few feet of a spring strongly impregnated with iron, and the soil in the immediate neighborhood contains iron ore which I should suppose would answer as well as to hang old iron on the limbs of the tree. A Seckel pear tree had 40 or 50 pears of a very large size; ripened well; about two weeks before they were ripe, the tree was attacked within two feet of the ground, although the tree was apparently healthy and vigorous above the wound; the flavor of the fruit was strongly affected by it. Could this have been caused by the ef-

education, and this knowledge can only be acquired by study, observation and experience.

That science is useless in agriculture. There is scarcely an operation in farming in which science is not valuable, either in teaching us to avoid error, or explaining the relation between cause and effect in the processes of agriculture.

That porkers are naturally unclean animals. Such a supposition does gross injustice to the pig, who maugre his want of reason, if he only have decent opportunities, is often a far more nice and cleanly animal than he who assumes to be his owner. A clean pen and new straw, is as much relished by the pig, as by any other bon vivant; and if there is a 'sufficiency of material' is shown by an extra kink to the tail.

POVERTY vs. MORALS.

We know not when we have met with any thing more clearly demonstrative of the total destruction of all the better feelings of our natures, effected by abject, hopeless poverty, than the following extracts from an examination of a physician of extensive practice in Norfolk and Suffolk, before the parliamentary committee on the Poor Law. The district referred to, is an agricultural one, and enjoys a greater degree of prosperity than almost any other in that country. Our surprise would have been less, had the facts reported occurred in the manufacturing districts; for these same examinations show that if in the deep of poverty and vice, there is a lower deep, the manufacturing poor have found it. We are imitators of the English in most things. Our code of poor laws, our system of pauperism, our plan of work-houses is mainly based on theirs; let us beware, lest we find the same fearful laxity of morals as a necessary consequent. The spirit of independence; an implicit reliance on our own exertions, must be cherished; or we shall find ourselves ere long with a population as degraded as that described in these extracts. When once the poor-house is looked to with complacency, the man or woman is lost. Honor, honesty or trust-worthiness in the man; modesty or virtue in the woman, may be spoken of, but cannot exist. Any code of laws, any system of management that operates as a premium on crime, and a direct stimulus to vice, as does the English poor laws, should be carefully examined and the defective parts eliminated, before they are adopted by the legislature of a young but rapidly growing nation. Such a system may be avoided at first, but the experience of the English nation proves that it cannot easily be changed.

"Question. From the returns which you have just put in, I find that in the whole of your unions there are 615 able bodied women in your work-house, and that out of those 192 have bastard children; the next class is single women without bastard children; are those single women without children likely to become mothers of bastards?"

"Answer. I think that a great number of them would probably be women of dissolute lives, and who probably come to the work-houses to be confined; but there are other young women in the workhouses who from various causes cannot get situations, and consequently become inmates of the work-house."

"Q. Then I am to understand that, in the returns which you yesterday gave in of the inmates of the different work-houses both in Suffolk and Norfolk, at least one-third of the able-bodied women who are now in these work-houses, are women with bastard children; and in addition to this one-third, there are several single women, who come merely to be confined in the work-houses?"

"A. As to the latter point, I should not dare to trust my memory; as to the former point, I think that the utmost reliance may be placed on the return."

"Q. The number of children likewise, I find in the whole of the work-houses of your unions, is 1837, and out of these there are 543 bastards, making between a third and a fourth of the whole number of children within the work-houses?"

"A. Yes; and I conceive that both are the natural consequences of the operation of the poor law, which has this effect not merely upon the men, but upon the women, that those who are trustworthy and skilful obtain good situations and are supported by honest wages; and those who have given evidence of a want of skill, or a want of trustworthiness, are, to a certain extent, dependant on the poor rate."

These facts, which cannot be controverted, are sufficient to put the American public on their guard, against the adoption as a whole, of a system that has produced such results. We have multitudes of foreigners coming into our country principally from England and Ireland; many of them are men of wealth; more of them are men of character, decision and intelligence; but another large portion are individuals who have been accustomed to the operation of the work-house system, and have so far subdued the naturally proud spirit of a man, that soup from the poor-house is sought and received with little shame or sense of disgrace. This feeling we fear will increase, and become contagious, unless at once broken up by the inculcation of a higher and healthy tone of moral culture; the extension, among this class, of education; and their elevation, by the direction of their attention to the fact, that competence in this country is attainable by all, and that he is unworthy the name of American who is not above all elymosynary aid. As yet the degrading influence of hopeless poverty is unknown among the citizens of *this* country; and on no class as yet is the corruption of morals which is its necessary consequent felt. Prevention of evils is better than cure, and industry and education are the certain and only safeguards.

From the Farmer's Cabinet.

Subdividing a Farm Properly, &c.

It is a matter of no small importance, and it requires much skill and judgment to lay off a farm properly into fields and inclosures so as to realize the greatest possible advantage by it, in regard to convenient access, equal size of inclosures, and convenience in watering of stock. The saving of fencing is also a matter of considerable consequence, both as it regards the expense in the first instance, as well as that occasioned by subsequent repairs.

Fields for cultivation should be rectangular, and the nearer they approach to a square, the less fence they require. The inclosures intended for a regular rotation of crops should be as near the same size as practicable, and the number of acres in each field should be accurately ascertained, and a register kept of it. The importance of having the fields to contain each a known number of acres, is of much consequence in manuring, liming, plastering, and in sowing grain and grass seeds, and also in determining the amount of produce per acre, as well as enabling a farmer to judge correctly of the amount of labor bestowed on a given space of ground. All these matters are too often *guessed* at, and somer times the guessing is so coarse as to lead both the proprietor and his friends into great errors of judgment. Fields being of equal dimensions, require the same amount of labor each year, in tilling them, produce as near as human means can effect it, the same amount of products, and give the ability to distribute the manure with an equal hand over the whole farm.

Although many farms are beautifully laid off into fields so as to attain the objects above stated in an admirable manner; yet there are many others, so cut up as not to indicate much intelligent design in its accomplishment, either in respect to convenience, or the due apportionment of the respective inclosures. Where this is the case a system should at once be adopted, the tendency of which would be in a few years to regulate and correct it. There is something so incongruous in one year cultivating a large field and the next a small one, that it cannot be duly appreciated, except by one who has made a trial of it; for one season your force is not adequate to your work, and the next it is superior to it. It is continual up and down hill work, and the larger fields suffer for want of an adequate supply of manure, and sometimes from insufficient culture.

Thorough culture always ranks first in agriculture; manure next, and then follows good crops and prosperity, which maketh the heart of the farmer glad; and stimulates him to renewed exertions in promoting the fertility of the soil, and by that means increasing the sum total to animal existence and enjoyment.

When fields are elevated above neighbor's grounds, heavy rains carry the finest, richest particles of the soil on to them, but this kind of trespass has not often been found to destroy good neighborhood; if it should unfortunately do so, a small gutter made near the line fence or a few stones judiciously arranged under, near, or against it, will generally correct the evil, and no doubt promote the interest of the more elevated farmer, by keeping within his own enclosures the food which his own crops may be the more luxuriant for partaking of. Those who have had the benefits of the washings of their neighbor's fields, can form some estimate of its importance, for

"What is one friend's loss is another's gain."

AGRICOLA.

Culture of Onions.

The town of Wethersfield (Con.) has long been famous for the large quantities of onions which are annually raised and exported to the West Indies and the southern states. It has been superstitiously supposed there is something in the soil of Wethersfield peculiarly adapted to the culture of onions; and this whim has no doubt discouraged many from attempting the cultivation of this valuable root, in other sections of the country, equally favorable to its growth. It is true the soil of Wethersfield is a rich gravelly and sandy loam, well adapted to horticultural purposes; but the success of its inhabitants in the culture of onions, is attributable in a much greater degree, to a particular virtue of the fingers of its females, than any peculiar properties of its soil.

The business of raising onions in Wethersfield, is reduced to a perfect system. The following is the method of cultivation. Early in the spring the land is manured by ploughing in fine manure from the stable or barn yard, in the proportion of about ten loads to the acre. That of neat cattle is preferred, as that of horres is considered of too heating a nature. After the manure is ploughed in, the land is well harrowed and laid out into beds five feet wide The beds are laid out by turning a furrow towards them each way. This raises the beds above the aisles and gives an opportunity for the water to run off should there be occasion for it. They are then raked with an iron-tooth, or common hay-rake, and the aisles suffered to remain as left by the plough. Thus prepared, the beds are ready to receive the seeds.

As early as the season will admit, the seed is sown in the following manner. A rake, with teeth a fort apart, is drawn crosswise of the beds, for the purpose of making drills for the reception of the seed. The seed is then sowed in the drill, with the thumb and fingers, and covered with the hand. From ten to twelve pounds of seed is put upon an acre. After the plants come up they are kept free of weeds, which generally require four weedings. A hoe of a suitable width to pass between the rows, is used in weeding, which saves much labor. When ripe they are pulled and the tops cut off with a knife. A sufficient length of top is left to tie them to the straw in roping. They are then roped, or bunched in ropes or bunches of 3 1-2 pounds, as required by the law of the state. An ordinary crop is from 6000 to 8000 ropes to the acre. The quantity annually raised in the town, is estimated from 1,000,000 to 1,500,000 ropes, which are sold at an average price of $2 a hundred, amounting to from $20,000 to $30,000.

Most of the labor in raising onions in Wethersfield, is performed by females. The cultivation of an acre requires from fifty to sixty days's labor of a female, whose wages, including board, is about forty-two cents a day. Though many of the young ladies of Wethersfield spend a portion of their time in onion gardens; yet in personal beauty, education and politeness, they are not excelled by females of far less industrious habits.—*Connecticut paper.*

Apple Butter.

Being at the house of a good old German friend in Pennsylvania, in September last, we noticed upon the table what was called apple butter; and finding it an agreeable article, we inquired into the modus operandi in making it.

To make this article according to German law, the host should in the autumn invite his neighbors, particularly the young men and maidens, to make up an apple butter party. Being assembled, let three bushels of fair sweet apples be pared, quartered, and the cores removed. Meanwhile let two barrels of new cider be boiled down to one-half. When this is done, commit the prepared apples to the cider, and henceforth let the boiling go on briskly and systematically. But to accomplish the main design, the party must take turns at stirring the contents without cessation, that they do not become attached to the side of the kettle and be burned. Let this stirring go on till the liquid becomes concrete—in other words, till the amalgamated cider and apples become as thick as hasty pudding—then throw in seasoning of pulverized alspice, when it may be considered as finished, and committed to pots for future use. This is *apple butter*—and it will keep sweet for very many years. And depend upon it, it is a capital article for the table—very much superior to any thing that comes under the name of apple sauce.—*Gospel Banner.*

Warts on Cow's Udders.

Not long since we published an inquiry as to a remedy for warts on cow's udders, and as no one has sent us a remedy, a number of subscribers have requested us to give one. We do not know of any remedy, but we think that rubbing them often in soft emollient substances, such as goose grease and the like, will probably effect a cure.—*Yankee Farmer.*

COMMUNICATIONS.

SEASON AND THE CROPS IN BERKSHIRE.

Mr. Tucker—I exceedingly regret that your paper does not more generally circulate in this region, but the day does not appear to have arrived when farmers *en masse* are to consider their profession as involving science in the noblest forms of excellence, and in variety, which man can scarcely number, or else we should not see so great a proportion of our husbandmen preferring the clamorous organs of political strife, to the quiet and unpretending messengers which tell from the experience of some fortunate discoverer, how "two spires of grass, or two blades" of corn, can be made to grow where but one grew before. Still, in the midst of our sorrow and grief, which we deem not without occasion, we find subject of congratulation that *agricultural science* is extending its influence with more general sway, and more perfect success, from year to year, which argues full well that its empire will yet be complete, and its triumph universal, until earth once more smiles in the beauty of long-lost—never to be forgotten Eden.

The season here has been of deep beauty and unusual fertility. Notwithstanding winter crowded far upon the domains of spring, insomuch the budding of embryo hope had almost become extinct; yet her thraldom once broken, the genial showers descended, and the kindly sunbeams warmed dormant nature, causing her to spring forth in rapid advances and unrivalled gayity. I have never, since my observation has watched the progress of times and seasons, seen the earth covered with so beautiful and deep a verdure as the past summer. Every thing which has sprung from it, has been dressed in rich and lovely green, until the changes of maturity have come over it. No stinted patch of meadow, or no half tilled piece of plough land, but has exhibited undeniable proof, that *harvest* shall not fail. Still, however, the labors of untiring industry, and the cares of adventuring enterprise, have met a reward which those can not possess who plough in haste and sow at random. Where thorough cultivation has kissed the earth and blessed it, she has returned a harvest that the fields, which sloth occupies, and the vineyards which indolence claims, *might have offered*, but could not bring forth.

Our forests, which adorn the sides and the summit of our enduring mountains, or disperse themselves in grove-like forms about our vallies, have been rich in the beauty of their verdure. It is not unusual on the rocky parts of the mountains in this region, to see decay commence before maturity is completed; hence when leaves are half grown on some trees, it is not rare to see them assume the sickliness of autumn on others, perhaps in close juxtaposition, thus commingling the scenery of the seasons. But this year they have retained their verdure to the last, and have yielded it to the call of nature rather than untoward circumstances.

In consequence of the lateness of spring, and the ill success of past years, the quantity of *corn* planted was less than formerly. This was unfortunate, as the most perfect success has attended its culture, which we hope will induce our farmers once more to commence in earnest the cultivation of their "golden crop."

Wheat, perhaps partly from the high price of flour, and partly from the encouragement of the legislature, has received increased attention. Much more has been raised the past season than in any, for many former years. We hope its culture will be further extended, as we are sure of desirable success, in this, which was *once* a wheat region. Were farmers more generally calculating men; could they all be acquainted with thea mount of *cash* annually paid from this county for flour, we are sure they would direct their energies in its behalf, and stop the current of cash which is yearly flowing from them to furnish for themselves what their own industry might procure, and their own lands yield. Of the varieties of wheat cultivated in this region, the Italian seems evidently the best adapted to our success. The ravages of the worm, have been, I believe, very limited in this region.

Rye is less cultivated than heretofore, and probably for good reason. The same expense of tillage necessary to ensure a good crop of it, will almost invariably give as many or nearly as many bushels of wheat.

Oats gave too heavy a growth of straw, which caused them to lodge. The crop is not so heavy as in past years. They cannot be considered a valuable crop, tending as they do to exhaustion. When it is fairly seen the same land and tillage necessary to *insure success* with them, will give a fair crop of twelve or fifteen bushels of Italian wheat, which last will leave the land in a far better condition, they will be less cultivated.

Potatoes have given probably an average crop, though some pieces suffered from drouth. Experience has fully proved that plaster put in the hill is a valuable manure for them, and where this is applied, dry weather has less effect on them, than when they are manured in the hill with yard manure. It may be asked, if plaster is as good as manure? For ourselves we prefer it, having tried both under similar circumstances, and were we to ask the farm yard to contribute at all to the benefit of our potatoe field, we should wish to have it spread its bounty as evenly as possible previous to the last harvesting.

The *Rnta baga* crop has been light, probably on account of the drouth in July, from which many things suffered. *Buck wheat* has given a good harvest.

The season for the last two months has been an unusually rainy one, said by our oldest inhabitants to have been the most so of any within their recollection. Of course the fountains have an abundant supply of water, at least for the setting in of winter, which appears to have given intimations of making a thorough going onset. We had one or two light falls of snow in October, which quickly disappeared in our vallies, though I believe the venerable Saddle back, which often hides its face in clouds, as they float from mountainous Vermont along the northern boundary of our county, and its more accessible brother, "*Rose Mount*,"—who from the western limits of this town and state, show you the fertile valley of the Hudson, with the beautiful river whence its name, its fine fields and charming landscapes, until the eye must sate its feast of western scenery by the long blue range of Catskills, their Mountain house, their farms and forests gay,—retained their mantle of purity for several days. The abundant rains and warm weather, furnished not only a suitable supply of fall feed, with which to rejoice the heart of man for the comfort of his beast, but also to protect the lap of earth, growing cold from the exhausting labor of years, with a comfortable protection for the season of repose.

Much mud is usually the consequence of much rain, at least we have found it so this fall. That article, if a luxury, having been so plenty, that even the poorest might enjoy it to satiety and the most miserly regale upon or in it without fear of exhausting his store. Consequently our roads, which like most roads, are much better adapted to dry than rainy weather, are badly cut to pieces. Is it not surprising that with all our zeal for improvement, and being so much of a pleasure loving people as we are, that we are so negligent in mending our ways, and dead to enjoyment as to be willing to jolt over rocks, which might invite the speculations of the geologist, and through ruts calculated to convey to the mind ideas of canals or the beds streams, which have forsook their accustomed channels? There can be no doubt, that if all men were as spirited in making and repairing roads as they are are interested in having them, but we should have as pleasant traveling in rainy as in dry seasons.

Snow fell on the night of the 19th to the depth of about 3 inches, and as the weather is cold, promises to keep for some time. It greatly reminds us of past winters, which have always contributed to our enjoyment, but we hope the coming one will not be as fertile in mountain drifts as some of its predecessors have been. The thermometer stood 7 below zero at 9 o'clock, A. M., yesterday.

W. B.

Mount Oseola, Richmond, Mass., Nov. 26, 1838.

Magnesian Limestone---Inquiry.

Mr. Tucker—In the notes to the Chemical Catechism published in the Cultivator, I read the following,—"Every farmer should ascertain the *nature* of his lime before he uses it in agriculture, as there are many extensive districts in England where the lime contains magnesia, which renders it injurious to the growth of vegetables." In the same number (the November one) is an article by the conductor that contains the following:—"The theory of Tannant, that magnesian limestone is prejudicial in agriculture, is a notable instance of error being thus perpetuated. His opinion has been implicitly adopted by most of the subsequent writers on agricultural subjects, and if it has not done much mischief, it has certainly prevented much good." Which of these authorities shall be considered correct? Mr. Buel alludes to the use of magnesian limestone in Pennsylvania, and in England as proofs of the innocence of such lime when applied to vegetation, and I presume such lime is harmless. But would it not be good policy to make assurance doubly sure in such a matter? Lime is coming more and more into use in this country, and as much of the limestone is said to contain magnesia, I should be glad if some of your correspondents in those sections where it has been most used, would give some information on the subject. Some of our lands are barren enough already; it would be a pity, if in the attempt to improve they should be made worse by an injudicious use of materials. Cannot your correspondent 'Holkham,' who seems to have paid much attention to the action of lime and its nature, favor us with a paper on its use in this country? I am sure such a paper from his pen would be useful, as it would be most acceptable to

A Farmer from New England.

From the Farmer's Register.

Actual State of Silk Culture in the North, and Remarks on its Extension in the South.

(*Concluded from page* 382.)

It is generally considered that the multicaulis is the most valuable mulberry in the country. In the southern states, and as far north as to New-York, and even in some parts of New England, it flourishes with great luxuriance; and the roots, and even branches for the most part, will withstand the winters without material injury. But for the more nothern portions of the United States, it is extremely doubtful whether it can ever be cultivated to advantage. It is certain that in the neighborhoods of Albany and Northampton, its growth is stunted: but local causes exist to render those places colder than any others in the same parallel of latitude. The soil for a considerable distance round them is so light and sandy, that it parts rapidly with its heat whenever the rays of the sun are withdrawn or excluded. For the northern and eastern states, however there are other species of the mulberry more hardy than the *multicaulis*, of a rapid and vigorous growth, and furnishing leaves of a large size and in great abundance. Distinguished cultivators there have their particular favorites. The Alpine was introduced and is patronized by Saml. Whitmarsh, the Canton by Dr. Stebbins, and the Brussa by some gentleman of Albany.* At Northampton, there is such a confusion of names, that persons residing at a distance have very little idea of what their mulberries really are. Instead of being designated in such a manner as to be readily distinguished from all others, the specific term of "multicaulis" is applied to species entirely distinct, as well from each other as from the multicaulis proper. Thus the Alpine is called the "morus multicaulis Alpinense;" and the Canton, the "Canton multicaulis." Both the Alpine and Canton have sufficient merits of their own to enable them to stand without any extrinsic aid; and appropriation of terms to which a definite idea has been long attached, is calculated to mislead and produce a false impression. The Alpine is only known as having been brought from the foot of the Alps, where it was called the "Chinese mulberry."

If the silk culture has not advanced with the rapid strides, in the states where it received its first impulse, which were predicted of it; yet it has made some progress in other places, where it has been recently introduced. A much larger number of worms has been fed during the past season than has ever been fed in one year before; and complete success, as far as I had the opportunity of observing or ascertaining, attended the management of them. In New Jersey, Pennsylvania and Delaware, and on the Eastern Shore of Maryland,

* Charles Rhind, Esq., formerly minister at Constantinople, introduced the Brussa mulberry.